REMARKS

Claims 1, 8, 16 - 21, 23 - 29, 31 and 38 have been amended.

Claims 1 - 51 are present in the subject application.

In the Office Action dated December 31, 2002, the Examiner has rejected claims 1 – 15 and 46 – 47 under 35 U.S.C. §101 and has rejected claims 1 – 51 under 35 U.S.C. §103(a). Favorable reconsideration of the subject application is respectfully requested in view of the following remarks.

Initially, Applicants gratefully acknowledge the courtesies extended by the Examiner and Primary Examiner Alam during the recent telephonic interview. Proposed claims were discussed in view of the cited art and rejection under 35 U.S.C. §101. The Primary Examiner recognized Applicants' position with respect to the cited art and indicated that the art rejection would be reconsidered and a further search required. In addition, the Primary Examiner indicated that the claims are directed toward statutory subject matter and that the rejection under 35 U.S.C. §101 would be withdrawn.

The Examiner has rejected claims 1 - 15 and 46 - 47 under 35 U.S.C. §101 because the claimed invention is allegedly directed toward non-statutory subject matter. This rejection is moot and should be withdrawn for the reasons discussed in the previously filed amendment and Examiner interview.

The Examiner has rejected claims 1 - 51 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,557,722 (DeRose et al). Briefly, the DeRose et al patent discloses a data processing system and method for generating a representation of an electronic document, for indexing the electronic document, for navigating the electronic document using its representation

and for displaying the electronic document on an output device. The system and method are used with electronic documents having descriptive markup which describes the content or meaning of the document rather than its appearance. Each markup element defines a node or element in a tree, where the tree is represented by providing a unique identifier for each element and for accessing a descriptor of the element. The element descriptor preferably includes indications of the parent, first child, last child, left sibling, right sibling, type name and text location for the element. The document representation is used to facilitate navigation of the text for constructing navigational aids, such as table of contents, and full text indexing.

In contrast, the present invention is directed toward a system, method and data structure (e.g., for encoding in a storage device) for storing a content object in a data repository as a group of hierarchically related content entities. Each content entity is contained in a separate file object. A list or outline containing container and non-container identifiers defines the content, order and structure of the content object. This list or outline is stored as a separate file object.

In order to assist in an understanding of the present invention, the present invention features may be illustrated by the following example with respect to generation of a content object in the form of a book. The book structure may include volumes each with one or more chapters, where each chapter, in turn, may include one or more sections. The content of the chapter sections resides in the data repository as individually accessible content entities. The present invention system basically represents the book in the form of a hierarchical outline of containers (e.g., representing volumes or chapters) and subordinate non-containers (e.g., sections). The non-containers are each associated with content entity identifiers indicating the content in the data repository to be included within the corresponding container and book. A user interface enables a user to manipulate the outline to select and alter the book content. In

other words, a user may construct the book with content (e.g., text, images, etc.) selected from the data repository. When the user adds, removes or moves a content entity identifier within the outline, the corresponding content is respectively added, removed or moved within the book.

This rejection is respectfully traversed since the DeRose et al patent does not disclose, teach or suggest the features recited in independent claims 1, 8, 16, 23, 31 and 38 of the list or outline being manipulable by a user to alter the content of the content object. However, in order to expedite prosecution of the subject application, independent claims 1, 8, 16, 23, 31 and 38 have been amended in accordance with the proposed claims to further clarify these features and recite the presence and position of containers and/or content entity identifiers within the list or outline being modifiable by a user to alter the content and arrangement or structure of the content object. Independent claims 16 and 23 have been amended to recite the content object as a user work. Dependent claims 17 - 21 and 24 - 29 have been amended for consistency with their amended parent claims.

The Examiner takes the position that the DeRose et al patent teaches a method for indexing and rendering electronic documents, especially electronic books. The book as a content object has a plurality of elements. An element directory consists of an array of element descriptors, each as a content entity representing an element of the document as the content object. The element directory is created as a file object by an indexing process in the mass storage device. The Examiner further alleges that the DeRose et al patent does not explicitly teach the list manipulable by a user to alter content of the content object and storing ones of the content entities as a plurality of individually accessible file objects each containing one content entity, but that the patent discloses utilization of pointers within the element descriptors to reference a particular text chunk in an open text file. With respect to the list or outline being

manipulable by a user, the Examiner takes the position that this subject matter is disclosed by the DeRose et al patent section describing document annotations. In addition, the Examiner takes the further position that it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the DeRose et al process to attain the claimed invention.

This rejection is respectfully traversed since the DeRose et al patent does not disclose, teach or suggest the features recited in the independent claims of the presence and position of containers and/or content entity identifiers within the list or outline being modifiable by a user to alter the content and arrangement or structure of the content object. As discussed during the interview, the present invention is directed toward construction and modification of a content object, such as a book. The book content may be represented by content entity identifiers within a list or outline each identifying a corresponding content element (e.g., stored individually in a data repository) for the book. A user may manipulate the content entity identifiers within the list or outline to alter the book content and arrangement. The above claim limitation reflects these aspects of the present invention. In contrast, the DeRose et al patent constructs an element directory, which the Examiner construes as the list or outline, from an electronic document markup file indicating the document content (See Column 5, lines 46 - 58; Column 9, lines 10 - 20; and Column 12, lines 51 - 58). The element directory does not facilitate control or alteration of document content as recited in the claims, but rather provides a fixed representation of a document for navigation, display and indexing purposes. In other words, a user cannot modify the element directory to alter content of the document as recited in the independent claims.

Although the Examiner cites the patent section describing annotations to disclose the claimed content altering features, the annotations are within a list separate from the element directory and are associated with specific document elements (See Column 23, lines 16 – 18).

Since the annotations are associated with or point to specific document elements, their order in the list does not affect the arrangement of the document as recited in the claims. In fact, annotations are typically provided without modifying the document (See Column 23, lines 62-63). Thus, the DeRose et al annotations do not disclose, teach or suggest the claimed features of the presence and position of containers and/or content entity identifiers within the list or outline being modifiable by a user to alter the content and arrangement or structure of the content object. Since the DeRose et al patent does not disclose, teach or suggest the features recited in independent claims 1, 8, 16, 23, 31 and 38 as discussed above, these claims are considered to be in condition for allowance.

Claims 2 - 7, 9 - 15, 17 - 22, 24 - 30, 32 - 37 and 39 - 51 depend, either directly or indirectly, from independent claims 1, 8, 16, 23, 31 or 38 and, therefore, include all of the limitations of their parent claims. The dependent claims are considered to be in condition for allowance for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in these claims.

In addition to the foregoing, it would not be obvious to modify the DeRose et al patent to attain the claimed invention. Specifically, this patent is directed to the rendering of an electronic document for display without modification of document content as discussed above. The content of the document is indicated in a markup file, while the element directory is a fixed representation of the document content. In contrast, the present invention is directed toward a web-based system enabling creation of content objects by manipulating lists or outlines of content entity identifiers (e.g., each identifying a corresponding content element) to alter content within the content object. Since the DeRose et al patent is concerned with display of documents, the patent is not directed toward content object creation and editing. Thus, there is no reason,

suggestion or motivation to modify the patent in a manner contrary to its specification to achieve the claimed invention. Thus, the DeRose et al patent does not render the claimed invention obvious.

The application, having been shown to overcome issues raised in the Office Action, is considered to be in condition for allowance and Notice of Allowance is earnestly solicited.

Respectfully submitted,

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APPENDIX

The following are the amended claims with markings to show the changes made, where brackets ('[ ]') indicate removed text and underlining indicates additional text.

--1. (Thrice Amended) A program storage device readable by a machine, tangibly embodying a file structure for storing a content object having a plurality of content entities to facilitate content adjustment, said file structure comprising:

an identifier file object containing a list of content entity identifiers defining the content and arrangement of the content object; and

a plurality of content file objects, each containing a content entity identified by one of the content entity identifiers contained in said list;

wherein the presence and position [said list] of content entity identifiers within said list is [manipulable] modifiable by a user to alter content and arrangement of the content object without manipulating the content entities identified by said content entity identifiers.

8. (Thrice Amended) A program storage device readable by a machine, tangibly embodying a file structure for storing a hierarchically structured content object having a plurality of content entities to facilitate content adjustment, said file structure comprising:

an identifier file object containing an outline of containers and content entity identifiers defining the content and hierarchical structure of the content object; and

a plurality of content file objects, each containing a content entity identified by one of the content entity identifiers contained in said outline;

wherein the presence and position of containers and content entity identifiers within said outline is [manipulable] modifiable by a user to alter content and structure of the content object without manipulating the content entities identified by said content entity identifiers.

16. (Thrice Amended) A method of [adjusting content of a content object] producing a user work in the form of a content object having a plurality of content entities each including at least one medium, comprising the steps of:

storing a list of content entity identifiers defining the content and arrangement of the [content object] work within an identifier file object;

storing the content entities identified by the content entity identifiers within a plurality of content file objects with each content file object containing a content entity identified by one of the content entity identifiers contained in said list; and

enabling [manipulation] modification of the presence and position [said list] of content entity identifiers within said list by a user to alter content and arrangement of the [content object] work without manipulating the content entities identified by said content entity identifiers.

17. (Twice Amended) The method of claim 16, further comprising the step of storing at least one attribute pertaining to the [content object] work in an attribute file object.

18. (Twice Amended) The method of claim 16, wherein at least one attribute is extracted from the [content object] work.

19. (Twice Amended) The method of claim 16, wherein ones of the content entities further comprise components associated with the [content object] work, and further comprising the step of storing the components in one or more associated component file objects.

20. (Amended) The method of claim 16, wherein the [content object] work is one of a book, a collection of images, an album, and a video.

21. (Twice Amended) The method of claim 16, wherein the [content object] work is a book and ones of the content entities are one of volumes, chapters and sections.

23. (Thrice Amended) A method of [adjusting content of a content object] producing a user work in the form of a content object having a plurality of content entities each including at least one medium, comprising the steps of:

storing an outline of containers and content entity identifiers defining the content and hierarchical structure of the [content object] work within an identifier file object;

storing the content entities identified by the content entity identifiers within a plurality of content file objects with each content file object containing a content entity identified by one of the content entity identifiers contained in said outline; and

enabling [manipulation] modification of the presence and position of containers and content entity identifiers within said outline by a user to alter content and structure of the [content object] work without manipulating the content entities identified by said content entity identifiers.

24. (Twice Amended) The method of claim 23, further comprising the step of storing at least one attribute pertaining to the [content object] work within an attribute file object.

25. (Twice Amended) The method of claim 23, wherein at least one attribute is extracted from the [content object] work.

26. (Twice Amended) The method of claim 23, wherein ones of the content entities further comprise components associated with the [content object] work, and further comprising the step of storing the components in one or more associated component file objects.

27(Amended). The method of claim 23, wherein the [content object] work is one of a book, a collection of images, an album, and a video.

28. (Twice Amended) The method of claim 23, wherein the [content object] work is a book and the containers are one or more of a book, a volume, and a chapter.

29. (Twice Amended) The method of claim 23, wherein the [content object] work is a book and ones of the content entities are one of volumes, chapters and sections.

31. (Thrice Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for

providing a file structure for storing a content object having a plurality of content entities, comprising:

a first set of program instructions for creating an identifier file object containing a list of content entity identifiers defining the content and arrangement of the content object; and

a second set of program instructions for creating a plurality of content file objects, each containing a content entity identified by one of the content entity identifiers contained in said list;

wherein the presence and position [said list] of content entity identifiers within said list is [manipulable] modifiable by a user to alter content and arrangement of the content object without manipulating the content entities identified by said content entity identifiers.

38. (Thrice Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for storing a hierarchically structured content object having a plurality of content entities, comprising:

a first set of program instructions for creating an identifier file object containing an outline of containers and content entity identifiers defining the content and hierarchical structure of the content object; and

a second set of program instructions for creating a plurality of content file objects, each containing a content entity identified by one of the content entity identifiers contained in said outline;

wherein the presence and position of containers and content entity identifiers within said outline is [manipulable] modifiable by a user to alter content and structure of the content object without manipulating the content entities identified by said content entity identifiers.--